

# Pratyush Bindal

+91-9897086464

pratyushbindal@hotmail.com

LinkedIn

GitHub

## Education

### Birla Institute of Technology and Science, Pilani

Aug 2022 - July 2026

Bachelor of Engineering in Computer Science (CGPA: 9.62 / 10.00)

Hyderabad, Telangana

- **Relevant Coursework:** Data Structures and Algorithms, Database Systems, Object Oriented Programming, Discrete Structures & Mathematics, Logic in Computer Science, Probability & Statistics, Linear Algebra

### G. D. Goenka Public School

April 2018 - July 2022

High School (Class XII: 96.6% and Class X: 97.6%)

Muzaffarnagar, Uttar Pradesh

## Experience

### Summer Research Intern

May 2024 - July 2024

Indian Institute of Remote Sensing (IIRS), Indian Space Research Organisation (ISRO)

Dehradun, Uttarakhand

### Undergraduate Teaching Assistant - PHY F111 (Mechanics, Oscillations and Waves)

Aug 2023 - Dec 2023

Birla Institute of Technology and Science, Pilani

Hyderabad, Telangana

## Skills

**Languages:** C, C++, Java, Python, HTML, CSS, SQL, JavaScript, TypeScript, Prolog, Verilog HDL, Assembly

**Technologies:** TensorFlow, PyTorch, Spring Framework, React, SolidJS, Google Cloud Platform

**Databases:** NoSQL, PostgreSQL & SQL-based databases like MongoDB, Supabase, Oracle MySQL

**Developer Tools:** Postman, VSCode, IntelliJ, Eclipse, PyCharm, Android SDK, Anaconda, Git, Docker

**Libraries:** numpy, scipy, pandas, matplotlib, scikit-learn, keras, seaborn, openCV

## Projects

### Reinforcement Learning In Cybersecurity | PyTorch, Python and related libraries

- Implemented AE-SAC and Twin Delayed DDPG (TD3) Algorithms on the NSL-KDD Dataset for Intrusion Detection
- Established ML-based Intrusion Detection System on the NSL-KDD Dataset to map alert-attack relations
- Comparatively evaluated various ML-RL algorithms for Fraud & Anomaly Detection on MQTT & AWID3 datasets

### Handwritten Digit Recognizer | Python

- Built a fully functional neural network recognising Handwritten Digits from scratch without using any libraries
- Executed Data Preprocessing steps, Forward & Backward Propagation, One Hot Encoder, Gradient Descent Algorithm, ReLU and Softmax Activation functions receiving an accuracy of 86.6%

### BITSBids | React, Spring Framework, Mongo DB, Maven

- Developed ready-to-scale Full Stack Bidding Website exclusive to BITSians via Google OAuth2 Authorisation
- Applied Dynamic Price Updation, Multiple Bids Prioritisation, Anonymous Chat Client, and Filtered Product Search

### StarWars Databank | Typescript, SolidJS, Supabase, PL/pgSQL

- Contributed to a Databank Website for storing, analysing, and categorising information about the StarWars world
- Created Frontend using SolidJS & used PostgreSQL in Supabase for developing backend database system

## Honours and Awards

- 100% Merit Scholarship Awardee (Awarded to Top 1% of the batch)
- 80% Merit-cum-Need Scholarship Awardee (Awarded to Top 3% of the batch)
- Among Top 255 students in IOQA 2020-21 organised by IAPT-HBCSE

## Volunteership and Extracurriculars

### Mathematics Mentor

Sept 2023 - Dec 2023

Academic Counselling Cell

Hyderabad, Telangana

- Mentored 1000+ students undergoing Mathematics I course at the institute

### Research, Editorial and Events Member

Oct 2022 - Sept 2023

Ad Astra - Astronomy and Science Club

Hyderabad, Telangana

- Gained an insightful experience researching about recent advancements in Astronomy & Astrophysics